

Marshall 229

Ohio Valley Industrial Corp. No. 2
Allied Chemical and Dye Corporation

S 1.0 mile from 39° 55' N; W 2.9 mile from 80° 45' W
Elevation 638' plus or minus
Log of washed cuttings from Rotary

Clay District, Marshall County, W. Va.

Interval
(Feet)

0-11	Fine sand and soil
11-75	Coarse river gravels
75-80	<u>Limestone</u> (70) light gray, fresh water, silty <u>River gravels</u> (30)
80-82	<u>Limestone</u> (28) as above, some grayish-tan; <u>coal</u> () rare <u>River gravels</u> (10)
82-89	<u>Coal</u> (90)) <u>Siltstone</u> (5)) <u>Pittsburgh Coal</u> <u>Limestone</u> (5) as) above)
89-96	<u>Limestone</u> (20) light gray to tan to brown, pyritic, silty, and lumpy, abundant <u>ostracods</u> , <u>Spirorbis</u> . <u>Shale</u> (15) silty, pyritic, dark <u>Coal</u> (15)
92-102	<u>Siltstone</u> (50) to <u>Sandstone</u> , light gray, micaceous; <u>Limestone</u> (35) as above, silty to dense; <u>Coal</u> (15)
102-108	<u>Sandstone</u> (70) fine-grained, micaceous, clayey, highly calcareous, friable, some medium, some ½" pebbles <u>Siltstone</u> (30) dark gray to brownish gray, pyritic
108-114	Gap - No sample
114-120	<u>Sandstone</u> (80) medium to fine, gray to tan, highly calcareous <u>Shale</u> (15) dark gray, hard, silty, pyritic <u>Limestone</u> (5) impure, silty, tan
120-126	<u>Sandstone</u> (70) as above; <u>Limestone</u> (7) as above; <u>Shale</u> (20) dark as above

Interval (Feet)	
126-130	<u>Sandstone</u> (80) fine grained, dense, well cemented <u>Limestone</u> (5) as above <u>Siltstone</u> (7) as above
130-135	<u>Sandstone</u> (60) to <u>Siltstone</u> , as above <u>Limestone</u> (10) marly, tan to gray <u>Siltstone</u> (25) medium gray to greenish Miscellaneous (5)
135-140	<u>Limestone</u> (80) dense, light gray to tan, abundant <u>ostracods</u> , <u>Spirorbis</u> ; <u>Siltstone</u> (15) pale greenish gray; <u>Shale</u> (3) pyritic, medium gray, carbon flecks
140-150	<u>Limestone</u> (65) as above, variegated <u>Sandstone</u> (15) to <u>Siltstone</u> , highly calcareous or sandy limestone <u>Shale</u> (20) grayish-red to pale greenish, silty, pyrite clusters
150-156	<u>Limestone</u> (45) light gray, yellow gray, grayish tan, <u>ostracods</u> <u>Siltstone</u> (7) limy, as above <u>Sandstone</u> (30) to <u>Siltstone</u> , chloritic, micaceous <u>Shale</u> (3) light grayish tan and carbonaceous <u>Coal</u> (1) <u>Shale</u> (10) grayish red
156-162	<u>Siltstone</u> (75) to <u>Sandstone</u> , as above, gray to greenish gray <u>Limestone</u> (20) as above <u>Shale</u> (3) dark clayey <u>Coal</u> (rare)
162-167	<u>Sandstone</u> (80) to <u>Siltstone</u> , as above; <u>Limestone</u> (15) as above, more tan; <u>Shale</u> (5) reddish, calcareous
167-172	<u>Siltstone</u> (65) pale greenish gray, some sideritic spherulites; <u>Limestone</u> (30) marly knots, <u>Spirorbis</u> ; silty <u>Shale</u> (5) red, calcareous
172-178	<u>Siltstone</u> (80) as above, paler gray; <u>Limestone</u> (10) as above Miscellaneous (7)

Interval (Feet)	
178-184	<u>Siltstone</u> (80) as above; <u>Limestone</u> (10) as above; <u>Shale</u> (5) medium gray, silty, micaceous;
184-197	<u>Siltstone</u> (90) medium gray, carbonaceous residus, some sand grains, wood fragments (pyritic) <u>Sandstone</u> (3) medium to fine <u>Limestone</u> (5) as above
192-208	<u>Siltstone</u> (80) medium to dark gray to brownish gray, grading to fine <u>Sandstone</u> (15) chloritic and micaceous, medium gray, pyritic clusters <u>Limestone</u> (5) as above
208-212	<u>Siltstone</u> (92) as above, shaly, little chlorite, pyritic, clusters and pyritized wood; <u>Limestone</u> (3) as above
212-217	<u>Siltstone</u> (50) as above; <u>Sandstone</u> (20) medium gray; <u>Limestone</u> (15) light to grayish tan, <u>ostracods</u> , pyritic; <u>Coal fragments</u>
217-228	<u>Sandstone</u> (80) medium to coarse, a few pebbles poorly cemented, chloritic, some mica, calcareous; <u>Siltstone</u> (7) medium gray, sideritic, spherules; <u>Siltstone</u> (5) pale green to light greenish gray, fine to coarse, micaceous; some feldspar fragments to $\frac{1}{4}$ inch. <u>Lime</u> (3) pellets
228-233	<u>Sandstone</u> (35) as above, finer; <u>Siltstone</u> (60) medium to dark gray, carbon residus
233-238	<u>Siltstone</u> (85) as above, shaley; <u>Sandstone</u> (10) as above, impure clayey <u>Lime</u> (5) pellets
238-244	<u>Siltstone</u> (25) as above <u>Sandstone</u> (65) medium to fine, to <u>Siltstone</u> , medium gray <u>Limestone</u> (7) grayish tan, fresh water <u>Shale</u> (2) black, micaceous, carbon residus, almost coaly
244-250	<u>Sandstone</u> (70) intergrading <u>Siltstone</u> ; sideritic spherules; <u>Limestone</u> (20) mainly pellets, grayish tan to brown, possibly some bedded; <u>Shale</u> (4) grayish red, calcareous; <u>Coal</u> (2) Shaley. <u>Shale</u> (1) carbonaceous

- Interval
(Feet)
250-254 Siltstone (80) intergrade to Sandstone;
 Shale (7) grayish red, silty, mainly non-calcareous
 Shale (2) carbonaceous, and Coal;
 Limonitic crust from shale;
 Limestone (10) as above

- 254-258 Shale (15) grayish red, clayey, calcareous
 Limestone (55) mainly pellets, greenish to reddish to
 grayish tan
 Siltstone (20) light greenish gray, fine-grained, cal-
 careous
 Sandstone (5) greenish
 Shale (3) gray, soft, clayey, pyritic

- 258-262 Sandstone (50) or sandy Limestone (), dense, highly
 calcareous, light greenish gray to gray;
 Siltstone (25) as above;
 Limestone (25) pellets, as above, ostracods

- 262-267 Sandstone (70) as above, lighter greenish gray, grades
 to Siltstone
 Limestone (10) light gray to tan, some silty bed fragments,
 ostracods
 Shale (15) silty, dark, shaley

- 267-272 Shale (75) grayish red, silty, weakly calcareous;
 variegated to greenish
 Shale (15) gray, hard, silty, to Siltstone, greenish
 gray;
 Limestone (5)

- 272-277 Shale (75) grayish red to greenish gray, clayey,
 calcareous;
 Siltstone (15) to silty shale, pale greenish gray
 Limestone (7) pellets, grayish tan

- 277-282 Shale (30) grayish red, as above,
 Limestone (10) pellets, pure and silty.
 Sandstone (40) fine to medium, some coarse
 Siltstone (15) to silty shale, as above
 Coal (1)

- 282-286 Shale (20) dark gray, silty, highly calcareous or Limestone,
 shaly, impure, pyritized fossils, appear to be brachio-
 pois, might be Spirorbis
 Limestone (20) tan to gray, fresh water
 Siltstone (20) gray to greenish gray

Interval (Feet)	
	<u>Sandstone</u> (10) medium to coarse <u>Shale</u> (28) grayish red, soft, silty <u>Coal</u> (1)
286-289	<u>Shale</u> (40) grayish red to greenish and yellow, calcareous; <u>Limestone</u> (40) pellets <u>Siltstone</u> (15) as above <u>Shale</u> (1) pyritic, black, calcareous
289-295	<u>Limestone</u> (10) light gray, pellets <u>Shale</u> (10) grayish red, as above <u>Siltstone</u> (15) as above <u>Limestone</u> (55) pale greenish gray to tan, sandy, brachiopods, Coal, <u>Sandstone</u> (5) as above <u>Coal</u> (1)
295-300	<u>Limestone</u> (75) greenish gray to tan, as above; finely silty, marine. <u>Siltstone</u> (10) as above; <u>Coal</u> (rare) <u>Shale</u> (5) gray, silty; <u>Limestone</u> (5) as above, pellets <u>Shale</u> (5) grayish red
300-307	<u>Shale</u> (40) grayish red, soft, clayey, calcareous <u>Siltstone</u> (30) shaley, gray to yellowish gray <u>Line</u> (15) pellets <u>Limestone</u> (5) marine, from above
307-310	<u>Shale</u> (10) grayish red, as above; <u>Siltstone</u> (20) as above, marine fossils; <u>Limestone</u> (65) light to greenish gray, Crinoids, brachiopods, gastropods <u>Limestone</u> (5) pellets <u>Coal</u> (1) <u>AMES</u>
310-316	<u>Limestone</u> (85) marine as above, light gray to white, dense to crystalline, bryozoa, etc. <u>Siltstone</u> (10) pale greenish <u>Shale</u> (5) grayish red
316-323	<u>Sandstone</u> () medium grained, well cemented, micaceous, some siltstone gradation <u>Shale</u> (10) grayish red <u>Limestone</u> (5) pellets

Interval (Feet)	
323-327	<u>Shale</u> (50) clayey, grayish red; <u>Sandstone</u> (50) as above;
327-332	<u>Sandstone</u> (75) fine grained, chlorite and mica, calcareous; <u>Shale</u> (25) clayey, grayish red, lime pellets
332-335	<u>Sandstone</u> (30) as above; <u>Shale</u> (50) as above; pellets (15); <u>Siltstone</u> (5) light greenish gray
335-339	<u>Shale</u> (55) grayish red, as above <u>Limestone</u> (20) pellets and beds <u>Sandstone</u> (20) as above Miscellaneous (5)
339-342	<u>Shale</u> (65) as above; <u>Limestone</u> (35) as above;
342-349	<u>Shale</u> (75) as above <u>Limestone</u> (15) as above <u>Siltstone</u> (5) green to gray, clayey <u>Sandstone</u> (5)
349-355	<u>Shale</u> (60) as above; <u>Siltstone</u> (5) as above; <u>Limestone</u> (30) pellets, greenish to tan
355-362	<u>Shale</u> (75) brighter grayish red; <u>Limestone</u> (20) pellets
362-366	<u>Shale</u> (40) as above <u>Limestone</u> (10) as above <u>Sandstone</u> (50) to <u>siltstone</u> , bright greenish gray, calcareous
366-370	<u>Sandstone</u> (75) as above, to <u>Siltstone</u> ; <u>Shale</u> (20) as above; <u>Limestone</u> (5) as above.
370-374	<u>Siltstone</u> (75) to <u>Sandstone</u> , finer than above <u>Shale</u> (15) grayish red, calcareous <u>Limestone</u> (5) as above <u>Shale</u> (5) silty, light to medium gray <u>Sandstone</u> (5)

Interval (Feet)	
374-377	<u>Shale</u> (40) grayish red, as above, silty in part <u>Siltstone</u> (50) to <u>Sandstone</u> <u>Limestone</u> (10) pellets
377-381	<u>Shale</u> (35) grayish red to greenish gray <u>Limestone</u> (10) pale, greenish gray, crystalline ? fossil fragments, silty to sandy. <u>Limestone</u> (10) pellets; <u>Siltstone</u> (45) to <u>Sandstone</u>
381-385	<u>Shale</u> (35) grayish red, as above; <u>Siltstone</u> (55) to <u>Sandstone</u> ; <u>Limestone</u> (6) pellets, as above; <u>Limestone</u> (3) sandy, as above.
385-391	<u>Sandstone</u> (90) to <u>Siltstone</u> , medium gray to greenish gray <u>Siltstone</u> (5) shaley, greenish to yellowish gray. <u>Shale</u> (5) grayish red.
391-401	<u>Sandstone</u> (75) to <u>Siltstone</u> , as above; <u>Shale</u> (15) grayish red; <u>Limestone</u> (5) pellets, grayish tan to purplish; <u>Shale</u> (5) light grayish tan, silty, carbon flecks.
401-405	<u>Siltstone</u> (70) to <u>Sandstone</u> , medium gray; <u>Shale</u> (20) grayish red, soft <u>Coal</u> (rare), pyrite clusters <u>Limestone</u> (10) pellets
405-410	<u>Shale</u> (50) grayish red, drab, clayey; <u>Shale</u> (40) dark gray, silty; <u>Shale</u> (5) light gray, clayey, carbon flecks; <u>Coal</u> (rare)
410-413	<u>Shale</u> (55) dark to medium gray, silty <u>Shale</u> (30) grayish red, both hard, silty, and soft, clayey <u>Siltstone</u> (5) <u>Coal</u> (1) <u>Limestone</u> (8) pellets, sideritic spherulites
413-415	<u>Coal</u> (60) good; <u>Shale</u> (20) grayish red, silty; <u>Siltstone</u> (5) <u>Limestone</u> (15) sideritic spherules

Interval (Feet)	
415-418	<u>Shale</u> (30) grayish red, soft, clayey; <u>Limestone</u> (15) pellets, gray to tan, fresh water; <u>Coal</u> (50)
418-420	<u>Coal</u> (25) <u>Limestone</u> (55) gray to tan, grading to silty, greenish gray <u>Siltstone</u> (10) greenish gray <u>Shale</u> (10) grayish red, pyrite clusters
420-426	<u>Coal</u> (10) <u>Limestone</u> (20) pellets and beds, <u>ostracods</u> <u>Shale</u> (20) light to greenish gray, silty <u>Shale</u> (40) grayish red.
426-431	<u>Shale</u> (50) grayish red <u>Shale</u> (10) light to greenish gray, silty <u>Limestone</u> (25) <u>Marine</u> , silty, light gray to tan, clean shells, <u>Grinoids</u> , <u>brachionods</u> <u>Coal</u> (5) <u>Limestone</u> (10) pellets <u>CAMBRIDGE LIMESTONE</u>
431-435	<u>Shale</u> (65) grayish red and yellow; <u>Limestone</u> (10) light gray, marine; <u>Shale</u> (5) dark gray, carb.; <u>Limestone</u> (20) pellets, pyrite (5)
435-438	<u>Shale</u> (55) grayish red <u>Sandstone</u> (25) fine grained, calcareous <u>Limestone</u> (25) pellets, some marine fossils
438-440	<u>Sandstone</u> (60) as above; <u>Shale</u> (20) grayish red; <u>Limestone</u> (15) pellets Miscellaneous (5) shells and coal
440-441	<u>Sandstone</u> (70) as above <u>Shale</u> (20) grayish red <u>Limestone</u> (10) pellets
441-445	<u>Siltstone</u> (95) medium gray to greenish gray sideritic <u>Sandstone</u> (5) fine grained.

Interval (Feet)	
455-461	<u>Sandstone</u> (85) light gray to greenish, fine-grained, sideritic <u>Siltstone</u> (15) as above
461-472	<u>Siltstone</u> (65) fine to coarse, sideritic, medium gray; <u>Sandstone</u> (35) as above
472-477	<u>Siltstone</u> (50) as above <u>Sandstone</u> (50) as above
477-486	<u>Siltstone</u> (45) as above; <u>Sandstone</u> (45) very fine grained; <u>Limestone</u> (10) sandy, grayish tan, might be fossiliferous
486-494	<u>Sandstone</u> (30) as above <u>Siltstone</u> (60) or silty <u>shale</u> , carbonaceous <u>Limestone</u> (10) sandy.
494-503	<u>Siltstone</u> (90) to <u>Shale</u> , as above, dark gray to brownish <u>Sandstone</u> (10) as above
503-511	<u>Siltstone</u> (97) to <u>Shale</u> , as above, carbon residua
511-518	<u>Siltstone</u> (97), as above, to fine grained, impure shaly <u>Sandstone</u>
518-525	<u>Shale</u> (80) and <u>Siltstone</u> , as above, finer, shell fragments <u>Siltstone</u> (2) sideritic, dense <u>Sandstone</u> (15) impure, fine grained, carbon residua, highly carbonaceous
525-533	<u>Coal</u> (20) good <u>BRUSH CREEK LIMESTONE</u> <u>Shale</u> (70) <u>Marine</u> , dark gray, <u>brachiopods</u> <u>Shale</u> (5) clay, silty <u>Siltstone</u> (5) sideritic
533-540	<u>Shale</u> (80) <u>marine</u> , as above, pyritic <u>Coal</u> (15) <u>Shale</u> (5) clay, medium gray, soft
540-547	<u>Shale</u> (50) light gray, silty <u>Limestone</u> (10) light gray to tan, pellets, from shale? <u>Shale</u> (25) <u>marine</u> <u>Siltstone</u> (15) to <u>sandstone</u> , dark gray

Interval (Feet)	
547-553	<u>Siltstone</u> (70) light gray, calcareous, finely brecciated in part <u>Shale</u> (10) marine <u>Limestone</u> (5) pellets <u>Shale</u> (15) greenish to light gray, silty
553-558	<u>Shale</u> (95) light gray to greenish gray, abundant greenish masses and sideritic spherules, silty; a cherty fracture <u>Shale</u> (5) dark gray to black, tan to greenish to gray
558-561	<u>Sandstone</u> (45) fine grained to <u>Siltstone</u> , relatively coarse, gray to tan <u>Shale</u> (35) mottled, as above <u>Siltstone</u> (15) or <u>Shale</u> , silty, grayish red, soft in part, calcareous.
561-569	<u>Sandstone</u> (25) medium to fine; <u>Siltstone</u> (60) greenish gray to gray; shaley; <u>Shale</u> (10) mottled <u>Shale</u> (5) grayish red
569-573	<u>Shale</u> (60) to <u>Siltstone</u> , greenish gray, as above; <u>Sandstone</u> (15) as above <u>Shale</u> (10) mottled <u>Siltstone</u> (15) light gray
573-578	<u>Sandstone</u> (30) to coarse <u>Siltstone</u> (65) impure, large mica flakes, abundant black pyritic inclusions
578-584	<u>Sandstone</u> (30) light gray, micaceous, weakly cal- careous <u>Siltstone</u> (20) medium gray, dark inclusions, calcareous
584-592	<u>Sandstone</u> (85) clean, white; <u>Siltstone</u> (15) as above;
592-598	<u>Sandstone</u> (95) as above, some iron stain
598-607	<u>Sandstone</u> (97) as above, coarser, poorly cemented
607-615	<u>Sandstone</u> (97) as above;

Interval (Feet)	
615-625	<u>Sandstone</u> (97) as above;
625-635	<u>Sandstone</u> (70) as above; <u>Shale</u> (10) gray, silty <u>Siltstone</u> (5) to <u>Sandstone</u> , medium gray; <u>Coal</u> (15) pyritic, good
635-642	<u>Sandstone</u> (70) as above <u>Shale</u> (10) as above <u>Siltstone</u> (5) as above <u>Coal</u> (15) as above
642-648	<u>Sandstone</u> (25) to coarse <u>Siltstone</u> , gray to tan; calcareous <u>Siltstone</u> (70) medium gray, tan stain <u>Coal</u> (5)
648-654	<u>Limestone</u> (30) silty, gray to tan; <u>Siltstone</u> (30) medium gray, to tan, silty; <u>Sandstone</u> (40) as above.
654-660	<u>Limestone</u> (40) silty, as above <u>Siltstone</u> (60) to <u>Shale</u> , silty, medium gray
660-664	<u>Shale</u> (90) medium to light gray, highly calcareous, Silty to sandy, soft, clayey, pyritic <u>marine fossils</u> <u>Limestone</u> (10) grayish tan to brown; impure, <u>Marine</u> <u>fossils, brachiopods</u>
664-673	<u>Shale</u> (40) silty to shaley, <u>Siltstone</u> , light gray to grayish tan; <u>Shale</u> (10) medium to dark gray, carbonaceous, <u>Coal</u> (15) good, some pyrite <u>Shale</u> (35) as above, marine
673-685	<u>Siltstone</u> (55) to <u>Sandstone</u> , light gray; <u>Limestone</u> (20) silty; <u>Coal</u> (5) as above; <u>Shale</u> (5) carbonaceous, as above; <u>Shale</u> (15) light gray, carbon flecks, clayey

Interval (Feet)	
685-692	<u>Sandstone</u> (75) light gray, fine-grained, grading to <u>Siltstone</u> , micaceous <u>Shale</u> (20) light gray, silty, slightly calcareous <u>Coal</u> (5)
692-700	<u>Sandstone</u> (75) fine-grained, micaceous <u>Shale</u> (15) silty to <u>Siltstone</u> , medium gray <u>Shale</u> (5) light gray, clayey
700-708	<u>Sandstone</u> (75) as above; <u>Siltstone</u> (15) as above
708-716	<u>Siltstone</u> (80) medium to dark gray to brownish impure, sideritic; <u>Sandstone</u> (20) as above
716-723	<u>Siltstone</u> (10) as above; <u>Shale</u> (15) medium gray, silty, clayey <u>Sandstone</u> (70) medium gray, impure to coarse <u>Siltstone</u>
723-730	<u>Sandstone</u> (90) white, poorly cemented, medium to fine-grained, some pebbles $\frac{1}{4}$ "; <u>Siltstone</u> (7) greenish gray
730-737	<u>Sandstone</u> (95) as above, clean, yellowish stain
737-741	<u>Sandstone</u> (70) coarse, some medium; <u>Shale</u> (25) silty, light gray to tan, clayey; <u>Coal</u> (3)
741-748	<u>Siltstone</u> (89) shaley, or silty <u>Shale</u> , medium to dark gray; <u>Sandstone</u> (10) as above; <u>Coal</u> (1)
748-756	<u>Shale</u> (75) medium gray, silty to <u>Siltstone</u> , sideritic in part <u>Sandstone</u> (24) impure, dark gray, grades to <u>Siltstone</u>
756-766	<u>Sandstone</u> (7) dark gray, silty to shaley, impure <u>Shale</u> (35) as above <u>Sandstone</u> (58) medium to fine-grained, light gray to white, non-calcareous

Interval (Feet)	
766-774	<u>Sandstone</u> (97) as above, micaceous <u>Siltstone</u> and <u>Shale</u> (3)
774-782	<u>Sandstone</u> (97) as above
781-786	<u>Sandstone</u> (97) as above, finer
786-796	<u>Sandstone</u> (97) as above
796-806	<u>Sandstone</u> () as above, coarse, some pebbles.
806-818	<u>Sandstone</u> (50) as above, coarse <u>Coal</u> (30) good <u>Shale</u> (20) dark gray, plant fossils
818-825	<u>Sandstone</u> (75) as above; <u>Shale</u> (20) as above; <u>Coal</u> (5) as above
825-834	<u>Sandstone</u> (95) medium to fine, well cemented in part
834-840	<u>Sandstone</u> (95) as above, mainly medium, some coarse